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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,070	06/25/2003	Thomas Joseph Pecorini	71562/US02	1620

7590 07/12/2005
Eastman Chemical Company
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EXAMINER

CHEN, VIVIAN

ART UNIT PAPER NUMBER

1773

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/606,070

Applicant(s)

PECORINI ET AL.

Examiner

Vivian Chen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2003.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 43-72 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 56-59, 63-65 and 70-72 is/are allowed.
6) ☒ Claim(s) 43-55, 60-62 and 66-69 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/2004; 5/2004.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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DETAILED ACTION

Specification

1. The amendment filed 12/12/2003 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: in the newly added claims, the deletion of the required relationship between Tg and R:

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 43-55, 60-64, 66-69 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention for the reasons stated above in the objection to the amendment filed 12/12/2003.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 43-55, 60-62, 66-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over:

(a) JAPANESE PATENT APPLICATION 02-164532 (hereinafter JP '532); or

(b) JAPANESE PATENT APPLICATION 02-187331 (hereinafter JP '331); or

(c) WO 96/06125 (hereinafter WO '125); or

(d) JAPANESE PATENT APPLICATION 02-301419 (hereinafter JP '419); or

(e) JAPANESE PATENT APPLICATION 01-299019 (hereinafter JP '019); or

(f) JAPANESE PATENT APPLICATION 02-196833 (hereinafter JP '833);

in view of MASUDA ET AL (US 5,153,302) and WATANABE ET AL (US 3,896,076).

JP '532 and JP '331 and JP '419 and JP '019 and JP '833 and WO '125 each disclose a biaxially oriented polyester film suitable for forming flexible circuitry wherein the film comprises a polyester containing the recited terephthalic acid and 1,4-cyclohexanedimethanol residues, and further disclose the recited stretch ratios, stretching temperatures, heat-setting temperatures, etc. Various features in specific references (e.g., cis/trans isomer content, inherent viscosity, etc.) not explicitly disclosed in the references are well known in the art.

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MASUDA ET AL discloses that it is well known in the art to incorporate 1,4-cyclohexanedimethanol with typical cis/trans isomer ratios of 4:6 to 0:10 in poly-1,4-cyclohexanedimethylene terephthalate polymers in order to form useful heat resistant biaxially oriented polyester films. (line 60, col. 1 to line 16, col. 2; line 55, col. 3 to line 18, col. 4)

WATANABE ET AL discloses that it is well known in the art to form flexible circuitry by bonding a copper foil having a typical thickness of less than 1 mm to polyester films via a thermal curable adhesive by applying pressure and heat at typical temperatures of 150 C. (lines 10-20, 42-50, col. 1; line 60, col. 1 to line 10, col. 2; line 23-55, col. 9; line 39-45, col. 10)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use heat resistant poly-1,4-cyclohexanedimethylene terephthalate films as substrates for conventional circuitry applications. One of ordinary skill in the art would have selected the inherent viscosity and melting point of the polyester (claim 47-49, 62, 68) depending on the mechanical properties, dimensional stability, and/or heat resistance required by specific applications. Regarding product claims 43-55, 60-62, 67-69, the orientation temperatures and stretch ratios, and heat setting times and temperatures, method of biaxial orientation are product-by-process limitations and is not further limiting in as so far as the structure of the product is concerned. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. ***The patentability of a product does not depend on its method of production.*** If the product in the product-by-process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." [emphasis added] *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). See MPEP 2113. Once a product

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appearing substantially identical is found, the burden shifts to applicant to show a *unobvious* difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1993).

Allowable Subject Matter

6. Claims 56-59, 63-65, 70-72 are allowable over the prior art of record.

7. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fails to disclose or suggest the recited biaxially oriented film formed from the recited polyester and having the recited combination of shrinkage and thermal expansion values.

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Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vivian Chen whose telephone number is (571) 272-1506. The examiner can normally be reached on Monday through Thursday from 8:30 AM to 6 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney, can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

The General Information telephone number for Technology Center 1700 is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 25, 2005



Vivian Chen
Primary Examiner
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